

**NETWORK SERVICE IMPROVEMENT PLAN
BUILDING AN EFFECTIVE
NETWORK TROUBLE ANALYSIS BUREAU**

**AN INTERDEPARTMENTAL EFFORT
CALL COMPLETION — FAST AND RIGHT — AS GOOD AS LOCAL
TRANSMISSION — CLEAR AND QUIET — AS ACROSS A DESK
BILLING — 100% ACCURATE — NOTHING LESS**



NETWORK SERVICE IMPROVEMENT PLAN INTRODUCTION

There is a need for a specialized maintenance force to coordinate efforts to reduce DDD trouble reports. DDD Service Bureaus meet this need by providing the specialized organizations required to receive trouble reports, analyze, detect and refer DDD troubles for correction.

There are occasions when the efforts of the maintenance organization alone can not achieve the desired results and interdepartmental support is required. In this event this plan provides for a DDD Task Force. The members of the task force may normally fill regular jobs which are involved with the network within their own departments. Their role is to join with the DDD Bureau full or part time as required to determine what additional efforts should be undertaken to supplement the Bureau's efforts. The task force members' role is to work with the Bureau and their respective departments to make sure the appropriate departmental support is available to the Bureau in the solution of particular problems.

Trouble analysis and correction is one important function contributing to good DDD service. On the other hand the provision of the right amount of equipment at the right time is fundamental to good and improving network service. The functions of forecasting the volume of traffic to be handled, designing the network to handle the forecast volumes, preparing traffic orders, specifying working equipment which can be removed from service during WECO installation activity, participating in the development and implementation of the MOP, assignment and administering its loading, and monitoring the overall service performance are also vital to good and improving DDD performance. These functions are and have traditionally been Traffic department functions.

To discharge these functions the Traffic department needs the full support of the Engineering department. It is Engineering's function to locate and allocate the resources to meet the forecast requirements for service. Engineering also places the detailed equipment orders on Western Electric and serves as the operating company contact with Western and other suppliers, such as building contractors.

When Traffic and Engineering functions are accomplished, then the department responsible for maintenance has the responsibility to ensure that the installed equipment operates with minimum trouble in order to maximize the number of completed calls. This Network Maintenance Improvement Plan is designed to organize the DDD maintenance groups for more effective efforts in keeping the installed equipment functioning to its maximum design parameters and to provide a means for prompt handling and involvement of Traffic and Engineering in problems requiring their expertise.

It was never intended that Service Bureaus would assume the responsibilities of the Plant line organization. The Bureau responsibility is to collect and analyze data which is not readily available to maintenance groups and thereby to help them direct their efforts to improve DDD service. The line forces should also contact the DDD Bureau when they need help in sectionalizing and locating troubles in the DDD Network. Such exchange of information develops mutual trust and cooperation between line forces and the Bureau which is vital to effective DDD service improvement.

The "Controlled Maintenance Plan" (CMP) and "Plant Management Instructions" (PMI) outline the methods to follow for proper maintenance and administrative procedures in switching and toll offices. These plans compliment the work of the "Network Trouble Analysis Bureau" in meeting DDD objectives.



Last but not least is the Bureau's responsibility to prepare meaningful performance reports for management. A sincere involvement by top level management is essential to a successful Network Maintenance Improvement Plan. Alert management quickly recognizes that any portion of the network that is not maintained to provide outstanding DDD service will produce excessive customer complaints, loss of revenues and a steady decline of customer DDD. Satisfied customers must be able to complete as many calls as possible on the first attempt. This requires that every management person must recognize his responsibilities to the Network Maintenance Improvement effort.



NETWORK TROUBLE ANALYSIS BUREAU
TABLE OF CONTENTS

INTRODUCTION

NETWORK TROUBLE ANALYSIS BUREAU

SECTION
010-401-010

- 1.0 General
- 2.0 Number and Location of Network Trouble Analysis Bureaus
- 3.0 Organization
- 4.0 Directing Head
- 5.0 Reference Library

Attachment: 1. Network Trouble Analysis Bureau

DDD SERVICE BUREAU

010-401-011

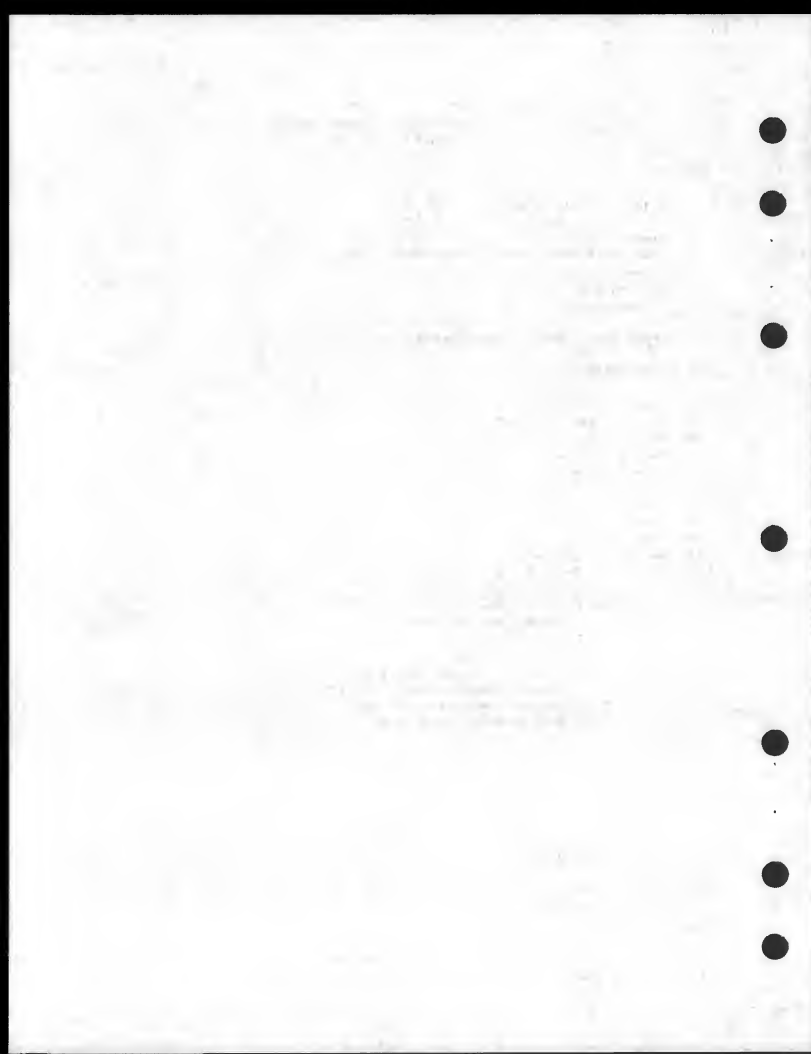
- 1.0 General
- 2.0 Number and Location of DDD Service Bureaus
- 3.0 Prime Area
- 4.0 Prime Area Extension
- 5.0 Hours of Operation
- 6.0 Size of Force
- 7.0 Bureau Chief
- 8.0 Analyzing Personnel
- 9.0 Clerks
- 10.0 Quarters and Equipment
- 11.0 Duties of DDD Service Bureau

Attachment: 1. Switching Plan (Routing Pattern)
2. Switching Plan (Basic Principle)
3. EDP Media Flow
4. AMA Tape Reports
5. Network Service Improvement (Exhibit #1)
5. Network Service Improvement (Exhibit #2)
6. DDD Bureau Activity Summary
7. Major Service Affecting Fail@res

DDD TASK FORCE

010-401-012

- 1.0 General
- 2.0 Task Force Projects
- 3.0 Duties of DDD Task Force
- 3.02 Engineer
- 3.03 Traffic
- 3.04 Independent Relations
- 3.05 Long Lines/Toll
- 3.06 Plant
- 3.07 Comptroller/Data Processing (Sample Format for Printouts)
- 3.08 Public Relations



- Attachments:
1. Format for Independent Company DDD Meetings
 2. Office Profile — Level Treatment
 3. Miscellaneous Bulletin for Independent Companies
 4. Sample Format — 555-1212 Charged in Error
 5. Sample Format — Pre-Billing Credit Request — Poor Transmission
 6. Sample Format — Pre-Billing Credit Request — Cutoffs
 7. Sample Format — Pre-Billing Credit Request — Wrong Number Differs
 8. Sample Format — Pre-Billing Credit Request — Wrong Number Same
 9. Sample Format — ANI Failures
 10. Sample Format — Detail of Reports and Traces — Originating
 11. Sample Format — Detail of Reports and Traces — Terminating
 12. Sample Format — Operator Encountered Reorders

SECTION
010-401-013

OPERATOR TROUBLE REPORTING

- 1.0 General
- 2.0 Classification of Trouble Reports
- 3.0 Report Sources and Disposition
- 4.0 Reporting Methods
- 5.0 General Procedures and Techniques

- Attachment:
1. Control Log for Operator Trouble Reports
 2. How Operators Report Trouble

TROUBLE TICKET

010-401-014

- 1.0 General
- 2.0 Trouble Classes (Source)
- 3.0 Trouble Codes (Type)
- 4.0 Making Non-TSPS Ticket Compatible
- 5.0 Details of Trouble Ticket

- Attachment:
1. Trouble Ticket Format
 2. Non-TSPS Trouble Format for Transmission

HOLD AND TRACE PROCEDURES

010-401-015

- 1.0 General
- 2.0 Analysis Before Tracing
- 3.0 Ground Rules for Holding and Tracing
- 4.0 When Not to Trace or Place Test Calls
- 5.0 Tracing Methods
- 6.0 Examples of Typical Traces
- 7.0 Tracing Beyond Prime Area and Prime Area Extensions
- 8.0 Field Responsibilities

- Attachment:
1. Tracing thru a 4A Using Operator Lockout. (Prime Area)
 2. Tracing thru a 4A Using Operator Lockout. (Prime Area Extension)
 3. Tracing thru XBT Using "Tone and Probe".
 4. Tracing from Class 4 to Class 3 — Trunk Selected in Multiple.
 5. Tracing from Class 4 to Class 4 — Trunk Selected in Multiple.
 6. Tracing from Class 4 to Class 3 to Class 4 — Trunk Selected in Multiple.



SECTION
010-401-016

TROUBLE ANALYSIS

- 1.0 General
- 2.0 Plan for Analysis
- 3.0 Identification of Weakspots
- 4.0 Selection of Weakspots
- 5.0 Miscellaneous

- Attachment: 1. Network Trouble Analysis Bureau Input
2. Areas of Action For Trouble Locating
3. Typical Trouble Analysis Procedure

SERVICE OBSERVING

010-401-017

- 1.0 General
- 2.0 Incoming Trunk Observations
- 3.0 Outgoing Trunk Observations
- 4.0 DDD Dial Line Observations
- 5.0 Outward Toll Observations (Switchboard)
- 6.0 Supplementary Observations

- Attachment: 1. Service Observing Locations

REORDER ANALYSIS

010-401-018

- 1.0 General
- 2.0 Operator Encountered Reorders
- 3.0 Reorder Traps (Mechanized)
- 4.0 Location of Card Punch
- 5.0 Hours of Operation
- 6.0 Trap Administration
- 7.0 Analysis — Reorder Terms (Non-Standard Traps)
- 8.0 Reorder Terms (Standard Traps)

- Attachment: 1. Tones and Announcements
2. Recommended Announcements
3. Why Mark RO Bubble
4. Mechanized RO Program

DDD COMMITTEE ORGANIZATIONS

010-401-019

- 1.0 General
- 2.0 DDD Steering Committee
- 3.0 DDD Service Improvement Committee
- 4.0 DDD Working Committee (Optional — Operations Committee)

AREA NETWORK SERVICE CENTER

010-401-020

- 1.0 General
- 2.0 Data Source
- 3.0 Duties of Area Network Service Center

- Attachment: 1. Long Lines Area Map



DDD SERVICE BUREAU REVIEW

SECTION
010-401-021

1.0 General

Attachment: 1. DDD Service Bureau Review

DDD SERVICE BUREAU DIRECTORY

010-401-022

1.0 General

MISCELLANEOUS REFERENCE MATERIAL

010-401-023

1.0 General

2.0 List of Articles on DDD Service Improvement

